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EXAMINER

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3715

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ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

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ADVISORY ACTION

1. The following is an Advisory action in response to the communication received on 03/23/2011.

Currently, claims 1, 18 and 19 are amended; claims 11 and 14-16 are canceled. Therefore, claims 1-10, 12-13 and 17-22 are pending in this application.

Response to Amendment

2. Applicant's amendment to claims 18 and 19 is sufficient to overcome the 35 U.S.C. 112, first paragraph rejection set forth in the previous office action. Accordingly, the Examiner withdraws the rejection.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

- Claims 1,3-6, 8-10, 12-13 and 17-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Caprai 6,251,015 in view of Ritchie 4,637,605.

Regarding claim 1, Caprai discloses the following claimed limitations, a riding simulation system for providing an operator with a simulated experience of a running condition of a motor cycle (col.1, lines 64-66), the system comprising a display for displaying scenery viewable to the operator as a video image on the display (see FIG 1, display not labeled), wherein the video image is simulated based on an operating condition designated by the operator through the operation of an operating condition

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simulating mechanism (col.3, lines 20-27), a steering handle mechanism capable of being gripped by the operator (FIG 3, labels 42, 56), a body for rotatably securing the steering handle mechanism (FIG 3, label 16).

Caprai further implicitly discloses, the body for rotatably securing the steering handle mechanism comprising a pair of left and right main frames (see FIG 2, label 28), a centrally located main frame (FIG 2, label 22).

Caprai does not explicitly disclose, a pair of sub-frames connected to roughly central portions of the left and right main frames so as to extend from the left and right main frames in a direction away from the operator of the simulation system, the control unit being mounted in a position between downwardly sloping linear portions of the pair of left and right main frames and under centrally located main frame; lateral sides of the control unit having lengths which are parallel to the downwardly sloping linear portions; the position of the control unit being such that most of the control unit extends below where the sub-frames are connected to the downwardly sloping linear portions of left and right main frames, the position of the control unit being rearward with respect to each of the sub-frames; wherein each of the left and right main frames includes a horizontal linear portion extending from a lower end of the corresponding downwardly sloping linear portion in the direction away from the operator of the simulation system direction and parallel to the corresponding sub-frame.

However, Ritchie teaches, a pair of left and right main frames, a centrally located main frame, a pair of sub-frames connected to roughly central portions of the left and right main frames (see Examiner's annotated figure, FIG A which is based on FIG 1 of

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Ritchie's apparatus, label Pair of sub-frames), and a control unit for the system being mounted in a position between downwardly sloping linear portions of the pair of left and right main frames and under the centrally located main frame (see FIG 1, label 3 and also see FIG A regarding the Examiner's interpretation); lateral sides of the control unit having lengths which are parallel to the downwardly sloping linear portions (see FIG A, label 3, see sides of the control unit are parallel to the "Right main frame" and the "Left main frame").

Ritchie further teaches, the pair of left and right main frames includes a horizontal linear portion extending from the lower end of the corresponding downwardly sloping linear portion in a direction away from the operator of the simulation system direction (see Examiner's annotated figure, FIG A which is based on FIG 1 of Ritchie's apparatus, labeled "Left main frame and Right main frame", and "Horizontal Linear Portion").

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the invention of Caprai in view of Ritchie by incorporating the apparatus of Ritchie into Caprai's system in order to provide a more realistic riding experience to the user (as taught by Ritchie.), so that the user would feel as if he/she is riding an actual bike.

With regard to the recited features, "the pair of sub-frames extending in a direction away from the operator of the simulation system", and "the horizontal linear portion being in a direction away from the operator of the simulator system direction and parallel to the corresponding sub-frame", Applicant's specification describes that the function of the frames is to attach the simulation system to a flat-surface table (see

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Para.0035, Para.0049 and Para.0051 of Applicant's disclosure). The prior art (e.g. Caprai) also discloses that the structural features taught in the reference (e.g. FIG 2, labels 22 and 28) are implemented to secure the simulation system on a table (see col.3, lines 45-50).

Therefore, it would have been an obvious matter of design choice as to the frame used for securing the simulation system, wherein no stated problem is solved or unexpected result is obtained by prescribing a pair of sub-frames extending in a direction away from the operator.

Caprai in view of Ritchie does not explicitly teach, "the position of the control unit being such that most of the control unit extends below where the sub-frames are connected to the downwardly sloping linear portions of left and right main frames, the position of the control unit being rearward with respect to each of the sub-frames".

However, the criticality or functional limitation disclosed in Applicant's original disclosure regarding the position of the control unit (the control unit is disposed between the right and left main frames) is to prevent the overall size of the simulation system from increasing in the height direction, so that it does not restrict the field of view of the operator (e.g. see Para.0057 and Para.0058 of Applicant's original disclosure).

It is also very apparent from the teaching of the prior art that the control unit (e.g. see Ritchie, FIG 1, label 3) is positioned between the left and right main frames, and under the centrally located main frame (see FIG A below regarding the frames identified by the Examiner) in such a way that it does not restrict the field of vision of the operator.

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Therefore, the system of the prior art appears to work well for the same intended purpose.

Caprai in view of Ritchie teaches the claimed limitations as discussed above.

Caprai further discloses,

Regarding claim 3, a clutch lever and a brake lever (FIG 3, labels 72 and 76),

Regarding claim 4, a steering handle angle sensor for detecting a turning amount of a tip end portion of the stem member (col.4 lines 37-56 and FIG 5).

Caprai in view of Ritchie teaches the claimed limitations as discussed above.

Caprai further discloses,

Regarding claim 6, the steering handle mechanism is formed in a cylindrical shape (FIG 3, label 56) and includes a throttle grip for an accelerating operation of the motorcycle displayed on the display (FIG 3, label 68 and col.6, lines 65-67),

Regarding claim 8, the steering handle mechanism is formed in a cylindrical shape (FIG 3, label 56), and includes a throttle grip (FIG 3, label 68) for an accelerating operation of the motorcycle displayed on the display (col.6, lines 65-67),

Regarding claim 9, the display being a display for a personal computer (col.3, lines 17-20),

Regarding claim 10, a casing being formed in a substantially box shape (FIG 1, label 14).

Caprai does not explicitly disclose, a circuit substrate being disposed in an interior of the casing of the control unit, and a plurality of connection cables being connected to the circuit substrate through connectors.

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However, Ritchie teaches, a circuit substrate (FIG 3, label 11) being disposed in an interior of the casing of a control unit (FIG 3, label 3), and a plurality of connection cables being connected to the circuit substrate through connectors (FIG 3, labels 15 and 17).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the invention of Caprai in view of Ritchie by placing a circuit element inside the casing in order to attach the rotating member(s) of the control unit directly with the control cables of the handlebar as taught by Ritchie.

Regarding claim 17, Caprai discloses the following claimed limitations: a riding simulation system for providing an operator with a simulated experience of a running condition of a motor cycle (col.3, lines 64-66), the system comprising a display for displaying scenery viewable to the operator as a video image on the display (see FIG 1, display not labeled), wherein said video image is simulated based on an operating condition designated by the operator through the operation of an operating condition simulating mechanism (col.3, lines 20-27), a steering handle mechanism including a steering stem, and an elongate steering handle capable of being gripped by the operator (FIG 3, labels 42, 56), a body for rotatably securing the steering handle mechanism (FIG 3, label 16), a control unit for said system (FIG 1, label 14).

Caprai further implicitly discloses, the body comprising a pair of left and right main frames (FIG 2, label 28), a centrally located main frame (see FIG 2, label 22).

Caprai does not explicitly disclose, the pair of left and right main frames each of which includes a downwardly sloping linear portion, a horizontal linear portion extending

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from a lower end of the downwardly sloping linear portion in a direction away from the operator of the simulation system, and a stopper mechanism having a fixing bolt provided at a forward end of the horizontal portion; a pair of left and right sub-frames each of which is connected to a roughly central part of the corresponding downwardly sloping linear portion in a position that is directly above the corresponding horizontal linear portion and extending in a direction that is away from the operator of the apparatus that is substantially parallel to the corresponding horizontal linear portion; the control unit being mounted in a position directly between the downwardly sloping linear portions and having lateral sides having lengths which are parallel to the downwardly sloping linear portions, the position of the control unit being rearward with respect to each of the sub-frames, and rearward with respect to the fixing bolts at the forward ends of the horizontal linear portions.

As already indicated above, Caprai does not explicitly disclose, "a stopper mechanism having a fixing bolt provided at a forward end of the horizontal linear portion".

However, the functional limitation of the stopper mechanism according to Applicant's original disclosure is to fix the frame body to a flat-surfaced table or the like (e.g. see Para.0035 of Applicant's original disclosure).

The prior art also describes that Caprai's system implements a clamping mechanism which is utilized to fix the frame body of the simulator on a table (e.g. see Caprai's system as depicted in FIG 2, label 26).

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Applicant has not disclosed in the original disclosure any importance as to why this stopper mechanism is critical to the current invention (or solves any stated problem) when compared to the prior art system, except for fixing the frame body to a flat-surfaced table.

Therefore, one of ordinary skill in the art (at the time of the invention was made) would readily recognize the fact from the teaching of the prior art that any suitable fastening mechanism would be implemented to securely attach the simulator on a table in order to prevent the simulator system from slipping (sliding) during training; and thus, the system of the prior art appears to work well for the intended purpose.

However, Ritchie teaches, the pair of left and right main frames each of which includes a downwardly sloping linear portion (see Examiner's annotated figure, FIG A which is based on FIG 1 of Ritchie's apparatus, labeled "Left main frame and Right main frame", each having a downward sloping linear portion), a horizontal linear portion extending from a lower end of the downwardly sloping linear portion in a direction away from the operator of the simulation system (see Examiner's annotated figure, FIG A, labeled "Horizontal Linear portion"), a pair of left and right sub-frames each of which is connected to a roughly central part of the corresponding downwardly sloping linear portion in a position that is directly above the corresponding horizontal linear portion and extending in a direction that is away from the operator of the apparatus that is substantially parallel to the corresponding horizontal linear portion (see Examiner's annotated figure, FIG A, labeled "Pair of sub-frames"), the control unit being mounted in a position directly between the downwardly sloping linear portions and having lateral

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sides having lengths which are parallel to the downwardly slopping linear portions (see FIG 1, label 3, see back section of control unit).

Ritchie further implicitly teaches the limitation, the position of the control unit being rearward with respect to each of the sub-frames, and rearward with respect to the fixing bolts at the forward ends of the horizontal linear portions" (FIG 1, label 3, see back section of control unit where the control box is connected to the sub-frames).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the invention of Caprai in view of Ritchie by incorporating the apparatus of Ritchie in order to provide a more realistic riding or simulation experience to the user, as taught by Ritchie.

Note that regarding the limitation, "the fixing bolts at the forward ends of the horizontal linear portions", the functional limitation with regard to the fixing bolts is to securely attach the control units on the main frames (e.g. see FIG 3 of Applicant's original disclosure).

The reference also indicates that the control unit of Caprai's system is securely attached between the main frames (FIG 1, label 3).

Therefore, here also one of ordinary skill in the art (at the time of the invention was made) would readily recognize the fact from the teaching of the prior art that any suitable attachment means (such as bolt, riveting or welding) would be implemented in order to securely attach the control unit between the frames, in order to keep the unit stable during operation of the simulator so that the control unit does not fall out of the frame.

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Furthermore, regarding the limitation, "the position of the control unit being rearward with respect to each of the sub-frames and rearward with respect to the fixing bolts", as already discussed with respect to claim 1 above, the criticality or functional limitation disclosed in Applicant's original disclosure regarding the position of the control unit (the control unit is disposed between the right and left main frames) is to prevent the overall size of the simulation system from increasing in the height direction, so that it does not restrict the field of view of the operator (e.g. see Para.0057 and Para.0058 of Applicant's original disclosure).

It is also very apparent from the teaching of the prior art that the control unit (e.g. see Ritchie, FIG 1, label 3) is positioned between the left and right main frames, and under the centrally located main frame (see FIG A below regarding the frames identified by the Examiner) in such a way that it does not restrict the field of vision of the operator.

Therefore, the system of the prior art appears to work well for the intended purpose.

Regarding claims 5 and 22, Caprai in view of Ritchie teaches the claimed limitations as discussed above.

Caprai further discloses, said riding simulation apparatus is adapted to be mounted on an elevated mounting surface (FIG 1, table not labeled).

Ritchie further teaches, the control unit is mounted such that the lengths of the lateral sides of the control unit are parallel to the downwardly sloping linear portions (FIG A, label 3, see sides of the control unit are parallel to the "Right main frame" and the "Left main frame").

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Regarding the recited feature, "the control unit is mounted completely away from an upper side of the elevated mounting surface", this appears to be a mere rearrangement of part. It has been held that a mere rearrangement of a part(s) that does not change or affect the principle of operation of the device does not patentably distinguish one invention from another. For instance, in re Japikse, 181 F.2d 1019, 86 USPQ 70 (CCPA 1950) (Claims to a hydraulic power press which read on the prior art **except with regard to the position of the starting switch** were held unpatentable because **shifting the position of the starting switch would not have modified the operation of the device.**); In re Kuhle, 526 F.2d 553, 188 USPQ 7 (CCPA 1975) (the particular placement of a contact in a conductivity measuring device was held to be an obvious matter of design choice).

As already discussed above with respect to claim 1, the criticality or functional limitation disclosed regarding the claimed position of the control unit is to prevent the overall size of the simulation system from increasing in the height direction, so that it does not restrict the field of view of the operator (e.g. see Para.0057 and Para.0058 of Applicant's original disclosure).

It is also very apparent from the teaching of the prior art that the control unit described in the references (e.g. Caprai, FIG 1, label 12 and Ritchie, FIG 1, label 3) is positioned in such a way that the field of view of the operator is not restricted.

Therefore, the system of the prior art appears to work well for the intended purpose.

Regarding claims 12 and 13, Caprai in view of Ritchie teaches the claimed limitations as discussed above.

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Ritchie further teaches, the casing of the control unit is disposed between a first main frame and a second main frame (see FIG A below with the Examiner's interpretation),

Therefore, it would have been obvious to one of ordinary skill in the art at the time o the invention was made to modify the invention of Caprai in view of Ritchie by placing the control unit between a pair of main frames in order to attach the rotating member(s) of the control unit directly with the control cables of the handlebar as taught by Ritchie (see col. 3, lines 8-15 and FIG 1 labels 3, 15 and 17).

Furthermore, providing plurality of flange portions on a given unit in order to attach the unit to a supporting member is an obvious and well-known expedient at the time of the claimed invention was made.

Caprai in view of Ritchie does not explicitly teach, a space is provided between left and right sides of the casing and the corresponding linear portion of the left and right main frames.

However, the above feature does not change or affect the principle of operation of the control unit, which is to perform data processing operation on the received data signals and send output to the display reflecting the operation of the simulator (e.g. see Para.0055 and Para.0056 of Applicant's original disclosure). Moreover, Applicant's disclosure (as originally filed) does not disclose any importance as to why this feature (e.g. providing space between left and right sides of the casing and the corresponding left and right main frames) is critical to the current invention (or solves any stated problem).

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Therefore, this does not patentably distinguish the current invention from the prior art, as the system of the prior art appears to work well for the intended purpose.

Regarding claims 18 and 19, Caprai in view of Ritchie teaches the claimed limitations as discussed above.

Caprai further discloses, the end of the centrally located main frame disposed farthest away from the operator (FIG 2, label 22).

Ritchie further teaches, the end of the centrally located main frame is connected to a cross frame bridging between tip end portions of the sub-frames (see FIG A, the section i.e. wall of the control unit where the end of the pair of sub- frames and end of the central frame are connected).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the invention of Caprai in view of Ritchie by linking the end of the steering stem to the sub-frames in order to achieve an optimum force distribution so that the simulation system would be more stable.

Note that regarding the limitation, *“wherein a forward-most face of the control unit, which is located rearwardly and separately of the cross frame, faces a rear side of the cross frame”*, as already discussed above, such rearrangement of the control unit does not affect or change the principle of operation of the device (which is to perform data processing operation on the received data signals and send output to the display reflecting the operation of the simulator (e.g. see Para.0055 and Para.0056 of Applicant's original disclosure).

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Thus, the mere rearrangement of the position of the control unit (i.e. positioning it rearwardly and separately of the cross frame) does not change or affect the principle of operation of the device. Therefore, a mere rearrangement of the location of the control unit does not PATENTABLY distinguish the current invention from the prior art.

Note that as already discussed above repeatedly, the criticality regarding the location of the control unit is to prevent the field of view of the operator from being restricted (e.g. see Para.0058 of Applicant's original disclosure). It is also apparent from the teaching of the prior art, the control unit (see Ritchie, FIG 1, label 3) is positioned in such a way that it does not restrict the field of view or vision of the operator. Therefore, the system of the prior art appears to work well for the intended purpose.

Caprai in view of Ritchie teaches the claimed limitations as discussed above. Caprai further discloses,

Regarding claims 20 and 21, Caprai in view of Ritchie teaches the claimed limitations as discussed above.

Ritchie further teaches, when the riding simulation system is viewed in a side elevation view, the left and right downwardly sloping linear portions can be seen to overlap the lengths of the left and right lateral sides of the control unit (see FIG A below along the "Left main frame" or along the "Right main frame" where the edges of the control unit are in parallel to the main frames).

In addition, the above recited limitation appears to be merely a position information or point of reference of a given part (i.e. point of reference of the control unit) when viewed at a particular side or angle; and therefore, this also does not

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patentably distinguish the current invention from the prior art since it does not change or affect the principle of operation of the claimed device.

- Claims 2 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Caprai 6,251,015 in view of Ritchie 4,637,605 and further in view of Pittarelli 3,964,564.

Regarding claim 2, Caprai in view of Ritchie teaches the claimed limitations as discussed above.

Caprai further discloses, the steering handle mechanism further comprising a steering stem having a generally fan-shaped upper portion (FIG 3, label 42), an elongate steering handle that is integrally held on the steering stem through a holder (FIG 3, labels 56 and 54), the steering handle mechanism further comprising one of a clutch lever (FIG 3, label 76) and a brake lever (FIG 3, label 72) are held on the steering handle, and left and right grips which are mounted respectively to end portions of the steering handle (FIG 3, label 60).

Caprai in view of Ritchie does not explicitly teach, lever joint portions through which at least one of a clutch lever and a brake lever are held on the steering handle.

However, Pittarelli teaches, lever joint portions through which at least one of a clutch lever and a brake lever are held on the steering handle (see FIG 1 labels 141, 142, 144 and col. 6, lines 53-55).

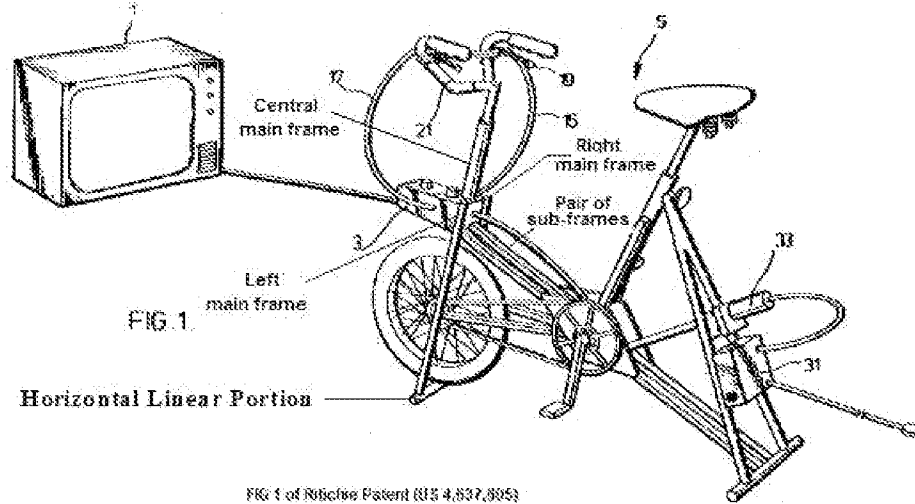
Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the invention of Caprai in view of Ritchie and further in view of Pittarelli by using clamps in order to construct the joint portions in a

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way that the operating levers would be swingable on the handlebar as taught by Pittarelli.

Regarding claim 7, Caprai in view of Ritchie and further in view of Pittarelli teaches the claimed limitations as discussed above.

Caprai further discloses, the steering handle mechanism is formed in a cylindrical shape (FIG 3, label 56), and includes a throttle grip (FIG 3, label 68) for an accelerating operation of the motorcycle displayed on the display (col.6, lines 65-67).



Response to Argument

4. Applicant's argument filed on 03/23/2011 have been fully considered; however, they are not persuasive. In the remarks, Applicant argues:

(1) Applicant submits that the combinations of references cited in the latest Office Action to reject these claims are not proper and should be withdrawn. (See arguments below.) For example, independent claim 17 as previously presented recites "a pair of left and right sub-

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frames 54a, 54b, each of which is connected to a roughly central part of the corresponding downwardly sloping linear portion 52ad, 52bd . . .

In addition, Ritchie fails to disclose or make obvious either: a pair of left and right sub-frames 54a, 54b, ... in a position that is directly above the corresponding horizontal linear portion 52ah, 52bh and extending in a direction that is away from the operator of the apparatus and that is substantially parallel to the corresponding horizontal linear portion 52ah, 52bh . . .

- In response to argument (1), the Examiner respectfully disagrees. As already indicated in the previous office action (and also in this current Advisory action), the current claims recite features that are already taught or suggested by the prior art. That means, the current claims do not appear to have any unobvious structural and/or functional limitations. Furthermore, the Examiner has already provided detail explanation as to why the current claimed invention is not patentable in view of the teaching of prior art (see previous office action for detail).

Regarding the teachings of Ritchie, the reference does teach or suggest the claimed limitations, for example, “a pair of left and right main frames, a centrally located main frame, a pair of sub-frames connected to roughly central portions of the left and right main frames”. This is evident especially when considering the above enhanced diagram (FIG A). For instance, the two frames labeled as “Left main frame” and “Right main frame” in the above figure correspond to the “pair of left and right main frames” recited in the claim. Similarly, the vertical tube/frame structure labeled as “Central main frame” corresponds to the “centrally located main frame” recited in the claims (note that the same type of evaluation applies to all claimed limitations). Therefore, it is very clear

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to realize that the combined teachings of the references does teach or suggest Applicant's currently presented claims.

With regard to the claimed limitations, for example, "*the pair of sub-frames extending in a direction away from the operator of the simulation system*" and the limitation, "*the position of the control unit being such that most of the control unit extends below where the sub-frames are connected to the downwardly sloping linear portions of left and right main frames*", it has already been indicated in the previous office action (and also in this current Advisory action) that the function of the frames (the pair of sub-frames) is to attach the simulation system to a flat-surface table (see Para.0035, Para.0049 and Para.0051 of Applicant's disclosure). The prior art (e.g. Caprai) also discloses that the structural features taught in the reference (e.g. FIG 2, labels 22 and 28) are implemented to secure the simulation system on a table (see col.3, lines 45-50).

Therefore, it would have been an obvious matter of design choice as to the frame used for securing the simulation system, wherein no stated problem is solved or unexpected result is obtained by prescribing a pair of sub-frames extending in a direction away from the operator.

Similarly, regarding the position of the control unit, Applicant's specification describes that the control unit is disposed between the right and left main frames in order to prevent the overall size of the simulation system from increasing in the height direction, so that it does not restrict the field of view of the operator (e.g. see Para.0057 and Para.0058 of Applicant's original disclosure).

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It is also very apparent from the teaching of the prior art that the control unit (e.g. see Ritchie, FIG 1, label 3) is positioned between the left and right main frames, and under the centrally located main frame (see FIG A above) in such a way that the control unit does not restrict the field of vision of the operator. Therefore, the system of the prior art appears to work well for the same intended purpose.

Therefore, the Examiner concludes that Applicant's currently presented claimed features have already been taught or suggested by the prior art.

(2) As can be seen in the Examiner's annotated FIG. 1 and 4 of Ritchie above, a major portion of control box 3 is located above and forward of the pair of pipes which the Examiner refers to as "pair of sub-frames," and this pair of pipes slopes downwardly toward the rider from the rear side the control box . . .

Further, on page 11 of the Office Action the Examiner appears to confuse fixing bolts 76 of claim 17 with attaching bolts 72 connecting the flange portions 70 to the main frames (as set forth in claim 12). Fixing bolts in claim 17 are shown in FIG. 1, and not in FIG. 3 as asserted by the Examiner.

- In response to argument (2), the Examiner respectfully disagrees. First of all, Applicant's argument appears to be directed to the rearrangement of the parts of the claimed device instead of the functional limitations associated with the parts. Such rearrangement of parts (that does not change or affect the principle of operation of the device) does not patentably distinguish the current invention from the prior art as long as the prior art teaches or suggests the functional limitations associated with the parts.

For instance, it has been held that in re Japikse, 181 F.2d 1019, 86 USPQ 70 (CCPA 1950) (Claims to a hydraulic power press which read on the prior art **except** with

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regard to **the position of the starting switch** were held unpatentable because **shifting the position** of the starting switch **would not have modified the operation of the device.**); In re Kuhle, 526 F.2d 553, 188 USPQ 7 (CCPA 1975) (the particular placement of a contact in a conductivity measuring device was held to be an obvious matter of design choice).

Thus, in the instant case (e.g. see response to argument (1)), the criticality with respect to the position or location of the control unit is to prevent the overall size of the simulation system from increasing in the height direction, so that it does not restrict the field of view of the operator (e.g. see Para.0057 and Para.0058 of Applicant's original disclosure). As it is very clear from the figures (e.g. see Ritchie FIG 1, label 3), the prior art system also satisfies this criticality since the control unit is positioned in a particular location so that the field of view of the operator is not restricted.

Therefore, the Examiner concludes that the prior art does teach or suggest Applicant's claimed limitations.

Secondly, the Examiner did not confuse any claimed limitation(s) with respect to claim 17. For example, Applicant has indicated that "*the Examiner appears to confuse fixing bolts 76 of claim 17 with attaching bolts 72 connecting the flange portions 70 to the main frames*". However, this appears to be Applicant's assumption based on the elements depicted on the drawings. However, it should be noted that the interpretation of the features recited in the claims is not limited according to the drawings. That means, the features recited in the claims should be interpreted based on their ordinary

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meanings (without relying on the narrow description presented in the specification or the drawings).

Nevertheless, it is very evident from the explanation presented in the previous office action (e.g. see page 9 of the previous office action), the Examiner's interpretation of the "fixing bolt" is very consistent with the description in the drawings. For instance, as already illustrated in FIG 2 of the current drawings, the fixing bolt (FIG 2, label 76) is utilized to attach the simulation system to a table or flat surface (FIG 2, label 116, also Para.0049 of Applicant's specification). This same interpretation is used when evaluating the features of claim 17. For example, the Office action states, "*the prior art also describes that Caprai's system implements a clamping mechanism which is utilized to fix the frame body of the simulator on a table (e.g. see Caprai's system as depicted in FIG 2, label 26 . . .).*"

This clearly indicates the fact that the Examiner's interpretation of the limitation "fixing bolt", as recited in claim 17, is consistent with the description presented in the specification and the drawings (see page 9 of the previous office action for detail).

(3) The Applicant submits that the Examiner has failed to establish a prima facie case of obviousness in the rejection of the claims of the present invention.

In numerous instances in the Office Action the Examiner makes unsubstantiated statements . . .

In making statements such as those above, it appears that the Examiner is using hindsight during the analysis of the cited references.

The Examiner states that even though the presently claimed elements, and the structural relationship among the claimed elements, are not disclosed or suggested by the cited reference, that is apparent (to the Examiner) that the different elements and different structural

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relationships discloses in the cited references serve the "intended purpose" (as imagined by the Examiner) . . .

- In response to argument (3), the Examiner respectfully disagrees. In order to establish a proper *prima facie* case of obviousness, according to MPEP, **706.02(j) [R-6]** ***Contents of a 35 U.S.C. 103 Rejection*** 35 U.S.C. 103 authorizes a rejection where, to meet the claim, it is necessary to modify a single reference or to combine it with one or more other references.

After indicating that the rejection is under 35 U.S.C. 103, the examiner should set forth in the Office action:

- (A) the relevant teachings of the prior art relied upon, preferably with reference to the relevant column or page number(s) and line number(s) where appropriate,
- (B) the difference or differences in the claim over the applied reference(s),
- (C) the proposed modification of the applied reference(s) necessary to arrive at the claimed subject matter, and
- (D) an explanation >as to< why >the claimed invention would have been obvious to< one of ordinary skill in the art at the time the invention was made**.

** "To support the conclusion that the claimed invention is directed to obvious subject matter, **either** the **references** must expressly or impliedly suggest the claimed invention **or** the **examiner** must present a convincing line of **reasoning** as to **why the artisan would have found the claimed invention to have been obvious in light of the teachings of the references.**" Ex parte Clapp, 227 USPQ 972, 973 (Bd. Pat. App. & Inter. 1985). **

In the instant case, for example, with respect to claim 1, the office action states, *“Regarding claim 1, Caprai discloses the following claimed limitations, a riding simulation system for providing an operator with a simulated experience of a running condition of a motor cycle (co1.1, lines 64-66), the system comprising a display . . .”* This section corresponds to PART A of the above rule. In this section, limitations that are disclosed by the primary reference are described.

The office action then states, *“Caprai does not explicitly disclose, a pair of sub-frames connected to roughly central portions of the left and right main frames so as to extend from the left and right main frames in a direction away from the operator of the simulation system . . .”*. This section corresponds to PART B of the above rule. In this section, limitations that the primary reference has failed to disclose are described.

The office action next states, *“However, Ritchie teaches, a pair of left and right main frames, a centrally located main frame, a pair of sub-frames connected to roughly central portions of the left and right main frames (see Examiner's annotated figure, FIG A which is based on FIG 1 of Ritchie's apparatus, label Pair of sub-frames) . . .”*

“Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the invention of Caprai in view of Ritchie by incorporating the apparatus of Ritchie into Caprai's system in order to provide a more realistic riding experience to the user (as taught by Ritchie.), so that the user would feel as if he/she is riding an actual bike.”

These two sections correspond to PART C and PART D of the above rule. In these sections, the limitations that are taught or suggested by the secondary reference are described (Part C). In addition, the motivation as to why one of ordinary skill in the

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art (at the time of the invention was made) would be motivated to modify the primary reference based on the teachings of the secondary reference is described (PART D).

Therefore, the Examiner concludes that proper *prima facie* case of obviousness has been established in the office action.

Regarding the limitations, for example, “*the lateral sides of the control unit having lengths which are parallel to the downwardly sloping linear portions*”, “*each of the left and right main frames includes a horizontal linear portion . . . in the direction away from the operator of the simulation system direction and parallel to the corresponding sub-frame*”; these and such similar limitations appear to be simple descriptions of the physical appearance of the different parts of the claimed device (e.g. view of one part relative to another) that do not affect or change the principle of operation of the claimed device. Therefore, such limitations do not patentably distinguish the current invention from the prior art.

For instance, the claim recites, “*the lateral sides of the control unit having lengths which are parallel to the downwardly sloping linear portions*”. This limitation simply recites the physical shape of the control unit without associating any substantial functionality with the recited shape. Moreover, this particular shape does not change or affect the principle of operation of the device. For example, according to Applicant’s disclosure, the functional limitation of the control unit is to detect signals indicating the operations of the system by the operator, perform calculations of parameters such as acceleration or deceleration, and send the evaluated data as an output to a personal computer (e.g. see Para.0056 of Applicant’s disclosure). It is very clear from this

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description that this functionality of the control unit does not rely on the specific shape recited in the above claims. Put it another way, no matter what the preferred shape of the control unit is, the functional limitations of the control unit is not affected by its shape.

Therefore, the Examiner concludes that Applicant's currently presented claimed limitations have already been taught or suggested by the prior art.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bruk A. Gebremichael whose telephone number is (571) 270-3079. The examiner can normally be reached on Monday to Friday (7:30AM-5:00PM) ALT. Friday OFF.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Xuan Thai can be reached on (571) 272-7147. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Bruk A Gebremichael/
Examiner, Art Unit 3715

/XUAN M. THAI/
Supervisory Patent Examiner, Art Unit 3715